

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Newfield Production Company
Well Name/Number: Sheriff #1-11H
Location: NW NE Section 11 T33N R7W
County: Glacier, **MT;** **Field (or Wildcat)** W/C

Air Quality

(possible concerns)

Long drilling time: 15 to 30 days drilling time.

Unusually deep drilling (high horsepower rig): No, super single drilling rig for a 6454' TD vertical pilot hole. Plug back to 4354' and kick off a single lateral Bakken Formation horizontal well 9384' MD/4,927' TVD.

Possible H2S gas production: Slight

In/near Class I air quality area: Yes, Class I air quality area, Blackfeet Reservation.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

- ☒ Air quality permit (AQB review)
- ☐ Gas plants/pipelines available for sour gas
- ☐ Special equipment/procedures requirements
- ☐ Other: _____

Comments: Super single drilling rig to drill a vertical basement test pilot hole to 6454' TD and plug back to 4354' and kick off a single lateral horizontal Bakken Formation test to 9384' MD/4,927' TVD.

Water Quality

(possible concerns)

Salt/oil based mud: Use freshwater and freshwater mud system on drilling surface, pilot hole and horizontal hole.

High water table: Possible, nearby wells are only 14' in depth and area is irrigated in the summer months.

Surface drainage leads to live water: No, nearby surface drainages. Only irrigation ditches open at the surface to deliver irrigation water.

Water well contamination: No, closest water wells are about 1/16 of a mile to the west and northwest and about 1/2 of a mile to the northwest of this location. Depth of all these water wells are 14'. Surface casing hole will be drilled with freshwater and freshwater muds to 1000' and steel surface casing run and cemented to surface to protect groundwater.

Porous/permeable soils: Yes, sandy silty soils.

Class I stream drainage: No Class I stream drainage.

Mitigation:

- ☒ Lined reserve pit
- ☒ Adequate surface casing
- ☐ Berms/dykes, re-routed drainage
- ☐ Closed mud system
- ☒ Off-site disposal of solids/liquids (in approved facility)
- ☐ Other: _____

Comments: 1000' of surface casing cemented to surface adequate to protect freshwater. Also, fresh water mud systems to be used on surface hole, intermediate string hole and horizontal lateral.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None anticipated.

High erosion potential: No, small cut, up to 2.0' and small fill required up to 0.3', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, large, 400'X300' location size required.

Damage to improvements: Slight, surface use is irrigated grass field.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: Using existing county roads, Hall Road. Access off existing Hall Road, approximately 100' of new road will be constructed into this location. Cuttings will be buried in the lined reserve pit. Drilling fluids will be allowed to dry in the lined pit. Pit will be backfilled when dry. No special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: There are 3 residences within ¼ of a mile west and northwest and within ½ of a mile there are 2 residences to the south from this wellsite. The town of Cut Bank, Montana is 6.5 miles to the east from this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Super Single drilling rig 15 to 30 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☒ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: No concerns, proper BOP stack and surface casing should be able to control any problems that occurs.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None, identified

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Species identified as threatened or endanger in Glacier County are Grizzly Bear, Canada Lynx and Bull Trout.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: _____

Comments: Private irrigated grassland. Drilling of this well should not impact any of species listed above. No concerns

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: _____

Comments: Private irrigated grassland. No concerns.

Social/Economic

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: No concerns

Remarks or Special Concerns for this site

Well is a vertical basement test pilot hole to 6454' TD and plug back to 4354' and kick off a single lateral horizontal Bakken Formation test to 9384' MD/4,927' TVD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected . Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): \s\Steven Sasaki

(title:) Chief Field Inspector

Date: May 5, 2010

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Glacier County water wells
(subject discussed)
April 27, 2010
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Glacier County
(subject discussed)

April 27, 2010
(date)

If location was inspected before permit approval:

Inspection date: May 4, 2010

Inspector: Klotz

Others present during inspection: Surface owner Mr. Robert Smith